

The Commonwealth of Massachusetts  
Executive Office of Health and Human Services  
Department of Public Health  
William A. Hinton State Laboratory Institute  
305 South Street, Jamaica Plain, MA 02130

DEVAL L. PATRICK  
GOVERNOR

TIMOTHY P. MURRAY  
LIEUTENANT GOVERNOR

JUDYANN BIGBY, MD  
SECRETARY

JOHN AUERBACH  
COMMISSIONER

09/16/2011

Thomas Costello  
Assistant District Attorney, Suffolk County

Dear ADA Costello,

Enclosed is the information you requested in regards to Commonwealth vs. [REDACTED] Included are copies of the following:

1. Curriculum Vitae for Annie Dookhan and Lisa Glazer.
2. Drug Analysis Laboratory Receipt.
3. Control Cards with analytical results for samples # [REDACTED]
4. Analysis sheets with custodial chemist's hand notations and test results.
5. GC/Mass Spectral analytical data for samples # [REDACTED]

Annie Dookhan was the custodial chemist and performed the preliminary testing and net weight for this sample. Lisa Glazer was the confirmatory chemist and analyzed the GC/MS data for this sample.

If you have any questions about these materials, please call me at the number below.

Sincerely,

A handwritten signature in black ink, appearing to read "Annie Dookhan".

Annie Dookhan  
Chemist II  
Drug Analysis Lab  
Jamaica Plain, MA. 02130  
(617) 983-6631

## Curriculum Vitae

### Annie Khan (Dookhan)

#### **Education:**

University of Massachusetts, Boston, Ma, Master of Science in Chemistry.  
University of Massachusetts, Boston, Ma, Bachelor of Science in Biochemistry.

#### **Experience:**

2003 – present

#### Chemist I, II, Massachusetts Department of Public Health, Drug Analysis Laboratory

- \*Completed six-week training course conducted by senior staff within the Department of Public Health, Drug Analysis Laboratory.
- \*Appointed Assistant Analyst by Assistant Commissioner of Public Health, 2004.
- \*Responsible for the identification of illicit drugs to determine violations of harmful and narcotic drug laws.
- \*Trained in the use of complex analytical instrumentation, microscopes and balances for the purpose of drug analysis.
- \*Maintenance and repairs of all analytical instruments.
- \*Responsible for the Quality Control of all analytical instruments, reagents and controls/standards.
- \*Oversee the Quality Control/Quality Assurance program for the Drug Lab.
- \*Writing, revising and reviewing Standard Operating Procedures (SOPs) and Protocols.
- \*Notary Public.
- \*Qualified as an expert witness in Massachusetts Courts and U.S. District Court

2001 – 2003

#### QC Analyst I, II, UMMS-Massachusetts Biologic Laboratory, QC Material Control

- \*Completed proficiency training conducted by a member of the staff within the MLB Quality Control and Quality Assurance Department.
- \*Method Development for creating new techniques and enhancing vaccines for the QC Dept. and FDA.
- \*Writing, revising and reviewing Standard Operating Procedures (SOPs).
- \*Trained and supervised new chemists and interns for the department.
- \*Routine QC testing of products for the FDA.
- \*Trained in the use of complex analytical instrumentation, and balances for the purpose of QC analysis for product and validation projects.
- \*Calibration, preventive maintenance, QC and QA of analytical instrumentation.
- \*Complete testing of chemicals for Vendor Validation Project for the FDA.
- \*Compendial testing and interpretation of the USP, ACS, FCC, AOAC, Merck Index, PDR, etc.

#### **Additional Training:**

Dept. of Justice – Forensics Professionals. (numerous trainings)  
GLP/GMP training with Massachusetts Biologic Laboratory.  
QC/QA training according to FDA Codes and Regulations.  
GC and GC/MS trainings with Agilent Technologies and Restek.  
HPLC and LC/MS/MS trainings with Waters Cooperation.  
FTIR training with Spectros.  
TOC training with MBL and Sievers.

#### **Association:**

American Chemical Society (ACS)  
Northeastern Association of Forensics Science (NEAFS)

## Curriculum Vitae

Lisa A. Glazer

### Education

Bachelor of Science Degree, CHEMISTRY January 2006  
UNIVERSITY OF NEW HAVEN  
Coursework included: Organic Chemistry, Inorganic Chemistry, Quantitative Analysis, Instrumental Analysis, Physical Chemistry, Physics, Calculus

Bachelor of Science Degree, FORENSIC SCIENCE January 2006  
UNIVERSITY OF NEW HAVEN  
Coursework included: Organic Chemistry, Quantitative Analysis, Instrumental Analysis, Physical Chemistry, Physics, Calculus, Biology, Criminal Justice and Forensic Science courses

---

### Employment

Chemist I, II State Laboratory Institute (May 2007-Present)  
Massachusetts Department of Public Health  
Drug Analysis Laboratory

- Responsible for the identification of substance to determine violation of the Massachusetts drug laws
- Operate analytical instrumentation for the purpose of performing forensic drug analysis
- Successfully completed an eight week training course in the analysis of drugs conducted by senior staff of the Department of Public Health, Drug Analysis Laboratory
- Appointed an assistant analyst for the Department of Public Health, Drug Analysis Laboratory in 2007.

Laboratory Technician I (August 2006 – May 2007)

University of Connecticut Chemistry Department - Storrs, CT

- Prepared unknowns, chemical reagents and supplies for undergraduate chemistry courses
- Set-up experiment demonstrations
- Properly disposed of hazardous waste from the experiments
- Made sure labs were being conducted safely
- Kept track of student laboratory paperwork, inventoried glassware and chemicals and helped clean glassware

Intern (September 2005 – November 2005)

CONNECTICUT STATE POLICE FORENSIC LABORATORY - Meriden, CT

- Worked on a Pyrolysis Gas Chromatography project
- Observed in the GSR testing, Forensic Biology, DNA, Questioned Documents, Black and White Photo, Latent Prints, Firearms, Trace Evidence and Color Photo Units

**Boston Police**  
DEPARTMENT

## DRUG RECEIPT

CC #

BOOK # 67PAGE # 113

DESTRUCTION #

District/Unit D-4 DCUName & Rank of Arresting Officer Sgt. Det. Keenan / Sgt. Det. Daley ID# 10652  
LT. DET Kern

DEFENDANT'S NAME

ADDRESS

CITY

STATE

BostonMA

## LAB USE ONLY

DESCRIPTION OF ITEMS SUBMITTED

GROSS QUANTITY

GROSS WEIGHT

ANALYSIS NUMBER

White Rock (crack cocaine)6 plbs10.36gGreen Herb (marijuana)2 plbs19.93g

To be completed by ECU personnel only

Name and Rank of Submitting Officer

Received by

ID# 9370Date 4-6-11

ECU Control #

No. [REDACTED]

Date Analyzed: 04/10/11

City: Boston D.C.U. Police Dept.

Officer: P.O. Diana Lopez

Def: [REDACTED]

Amount:

Subst: SUB

No. Cont: 6 Cont: pb

Date Rec'd: 04/06/2011

No. Analyzed: 2

Gross Wt.: 10.36

Net Weight: 1.31

# Tests: 12 ADD

Prelim: Cocaine<sup>(C)</sup>

Findings: Cocaine<sup>(C)</sup>

No. [REDACTED]

Date Analyzed: 06-15-11

City: Boston D.C.U. Police Dept.

Officer: P.O. Diana Lopez

Def: [REDACTED]

Amount:

Subst: VM

No. Cont: 2 Cont: pb

Date Rec'd: 04/06/2011

No. Analyzed: 1

Gross Wt.: 19.93

Net Weight:

# Tests: 3 ADD  
Meth<sup>(C)</sup> Meth<sup>(C)</sup>  
Diaz<sup>(C)</sup>

Prelim:

Findings: Marijuana

G/H/S +  
G/OC/G/H/S

Answers = 14.5  
Answers = 13.3

# DRUG POWDER ANALYSIS FORM

SAMPLE # [REDACTED] AGENCY Boston ANALYST AS7

No. of samples tested: \_\_\_\_\_ Evidence Wt. \_\_\_\_\_

PHYSICAL DESCRIPTION: Gross Wt (lb): 1.9670

OFF white chunky substance Gross Wt ( ): \_\_\_\_\_

(7) 6 phs Pkg. Wt: \_\_\_\_\_

Net Wt: \_\_\_\_\_

1 large pb

10mg = grosswt - pb = 1.1586

5 small pb

net wt = 0.8328

double bagged

Small = grosswt 5 pb = 0.8056

grosswt - pb = 0.1901

net wt = 0.0961

## PRELIMINARY TESTS

### Spot Tests

Cobalt

✓ Thiocyanate (-) +

✓ Marquis -

✓ Froehde's -

✓ Mecke's -

### Microcrystalline Tests

Gold

✓ Chloride +

✓ TLTA (7) +

### OTHER TESTS

## PRELIMINARY TEST RESULTS

RESULTS cocaine

DATE 6-8-11

## GC/MS CONFIRMATORY TEST

RESULTS cocaine

MS OPERATOR LAG

DATE 6-10-11

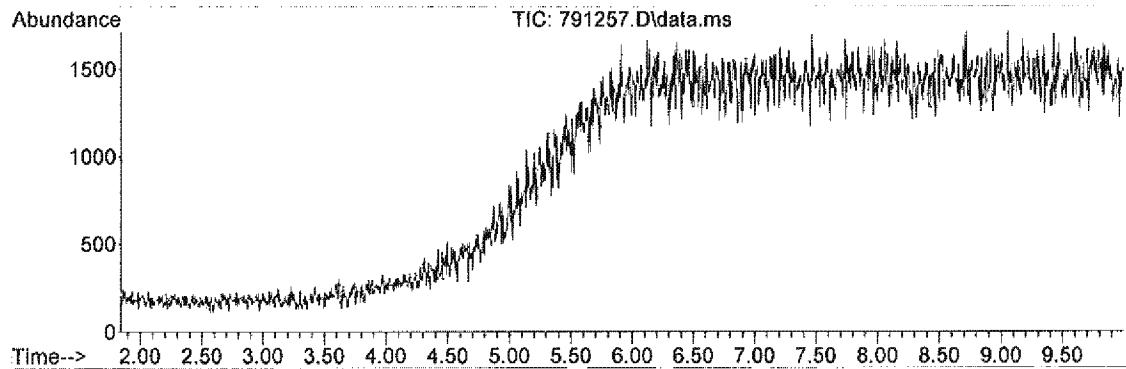
Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791257.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 20:56  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 2  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

---

\*\*\*NO INTEGRATED PEAKS\*\*\*

✓ 9/15/11 JDB

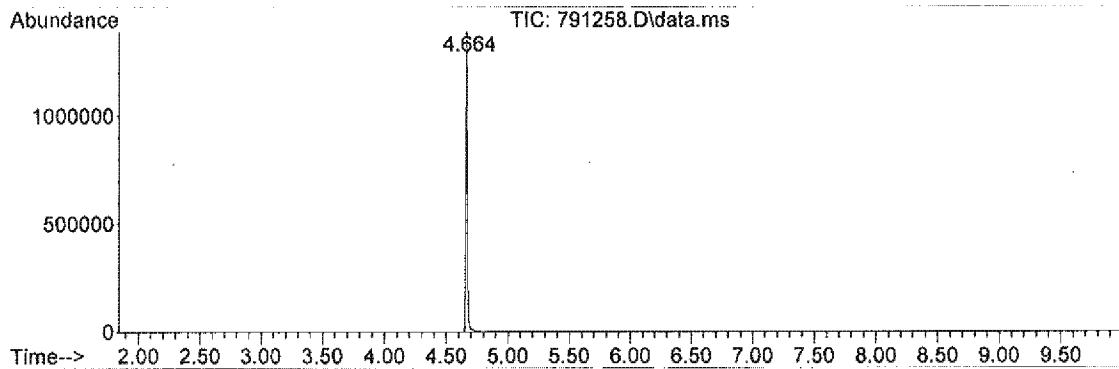
Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791258.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 21:09  
Sample Name : COCAINE STD  
Submitted by : ASD  
Vial Number : 58  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---



---

| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 4.664     | 1216770 | 100.00 | 100.00  |

---

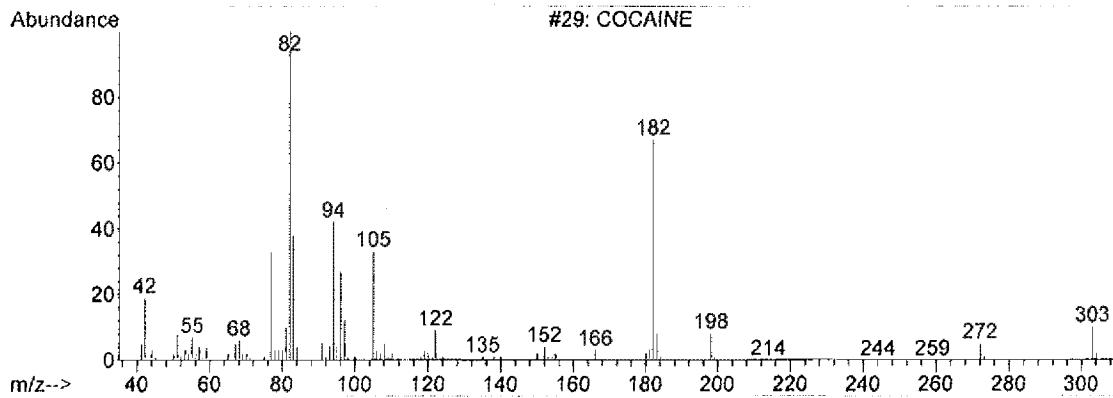
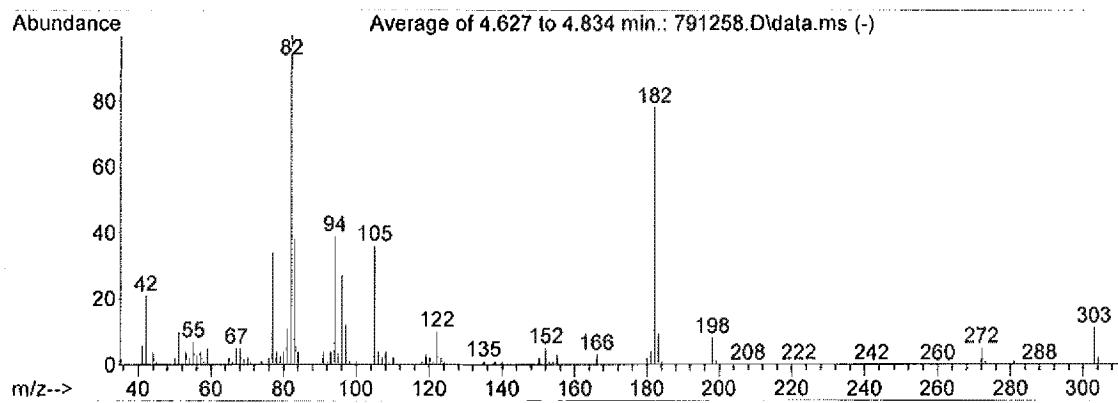
Area Percent / Library Search Report

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791258.D  
 Operator : ASD  
 Date Acquired : 9 Jun 2011 21:09  
 Sample Name : COCAINE STD  
 Submitted by : ASD  
 Vial Number : 58  
 AcquisitionMeth: DRUGS.M  
 Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
 C:\Database\NIST05a.L Minimum Quality: 80  
 C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 1   | 4.66 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



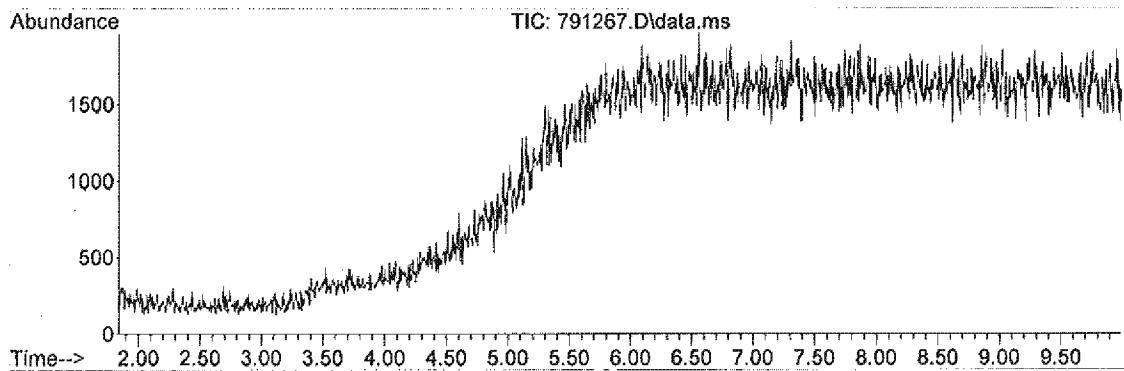
Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791267.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:03  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 2  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

---

\*\*\*NO INTEGRATED PEAKS\*\*\*

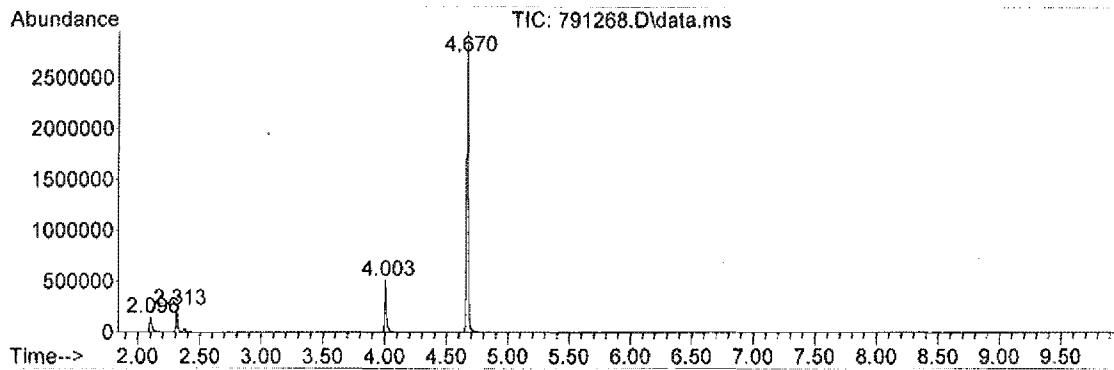
Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791268.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:16  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 68  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---



---

| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 2.096     | 210228  | 5.12   | 6.70    |
| 2.313     | 230403  | 5.61   | 7.34    |
| 4.003     | 528463  | 12.86  | 16.83   |
| 4.670     | 3139284 | 76.41  | 100.00  |

---

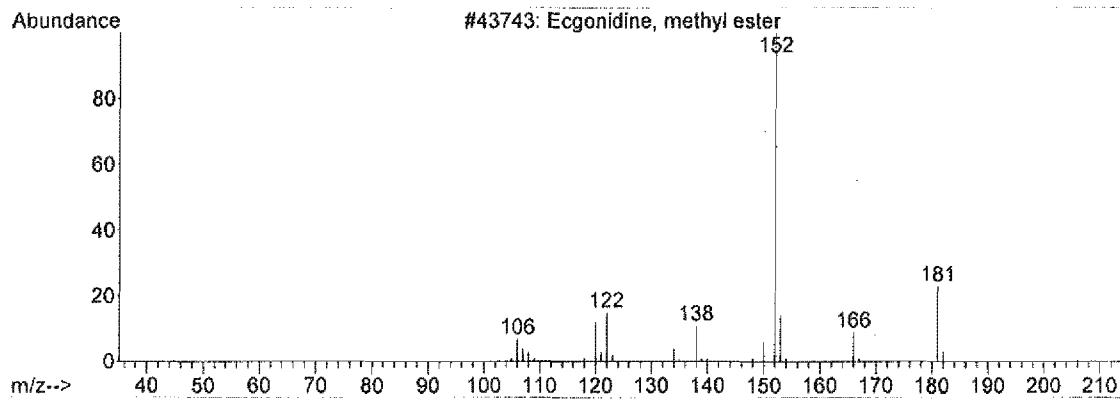
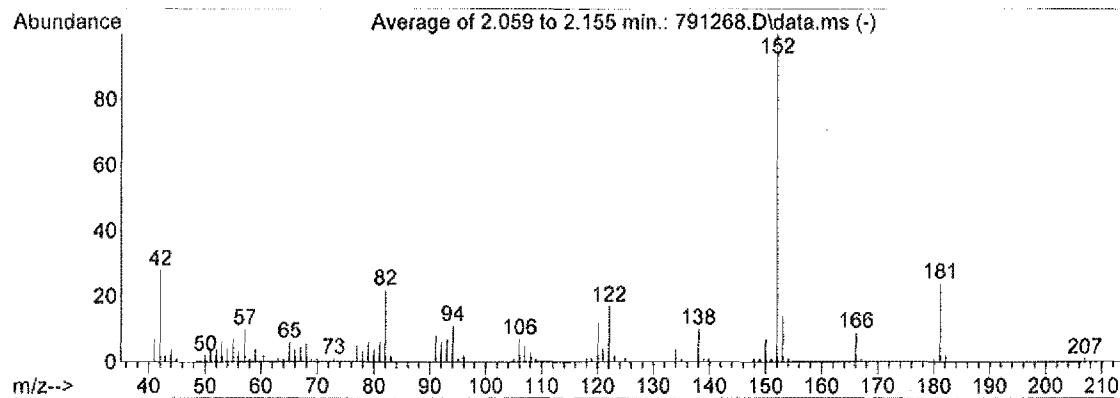
## Area Percent / Library Search Report

## Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791268.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:16  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 68  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                          | CAS#        | Qual |
|-----|------|-------------------------------------|-------------|------|
| 1   | 2.10 | C:\Database\NIST05a.L               |             |      |
|     |      | Ecgonidine, methyl ester            | 127379-24-2 | 98   |
|     |      | 2-Carbomethoxy-8-methyl-8-azabicycl | 043021-26-7 | 97   |
|     |      | Benzeneethanamine, 3,4-dimethoxy-   | 000120-20-7 | 43   |



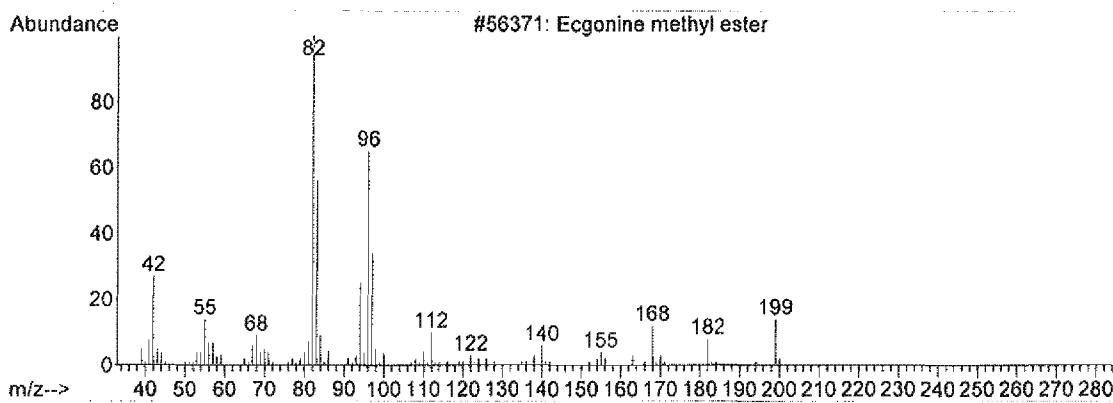
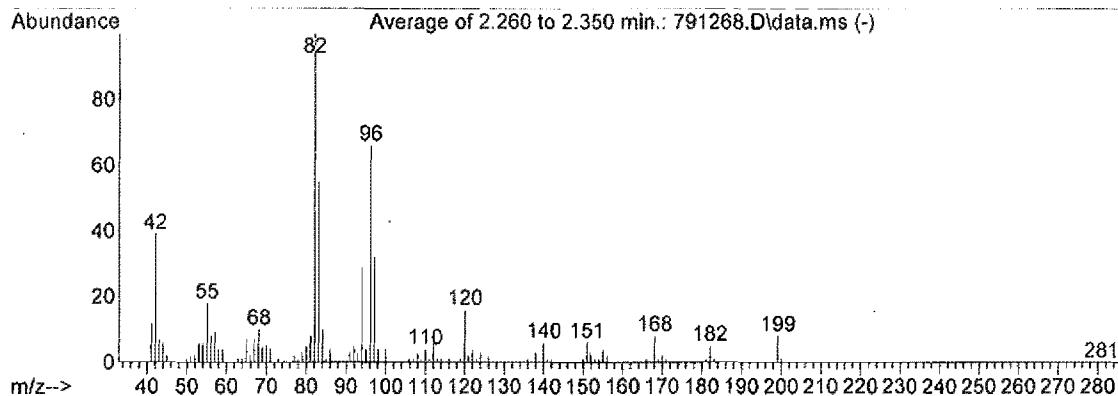
Area Percent / Library Search Report

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791268.D  
 Operator : ASD  
 Date Acquired : 9 Jun 2011 23:16  
 Sample Name : XXXXXXXXXX  
 Submitted by : ASD  
 Vial Number : 68  
 AcquisitionMeth: DRUGS.M  
 Integrator : RTE

|                   |                        |                     |
|-------------------|------------------------|---------------------|
| Search Libraries: | C:\Database\SLI.L      | Minimum Quality: 80 |
|                   | C:\Database\NIST05a.L  | Minimum Quality: 80 |
|                   | C:\Database\PMW_TOX2.L |                     |

| PK# | RT   | Library/ID            | CAS#        | Qual |
|-----|------|-----------------------|-------------|------|
| 2   | 2.31 | C:\Database\NIST05a.L |             |      |
|     |      | Ecgonine methyl ester | 106293-60-1 | 98   |
|     |      | Ecgonine methyl ester | 106293-60-1 | 98   |
|     |      | Ecgonine methyl ester | 106293-60-1 | 96   |



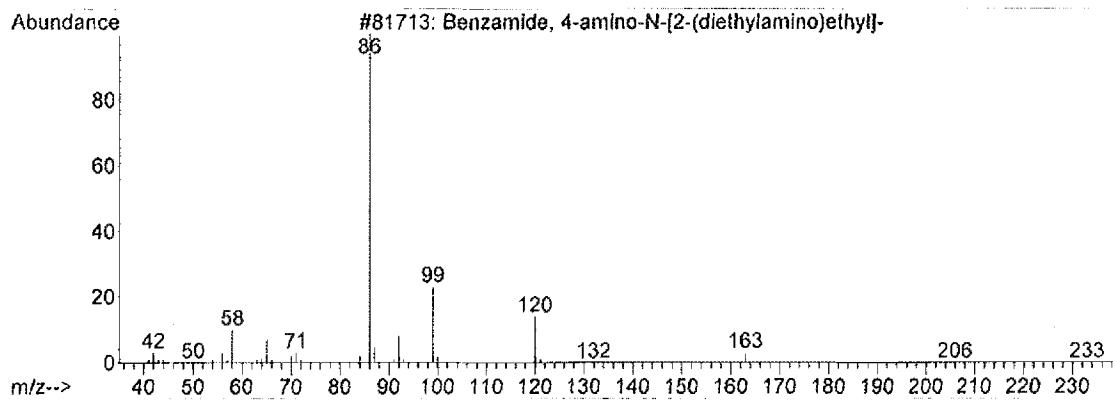
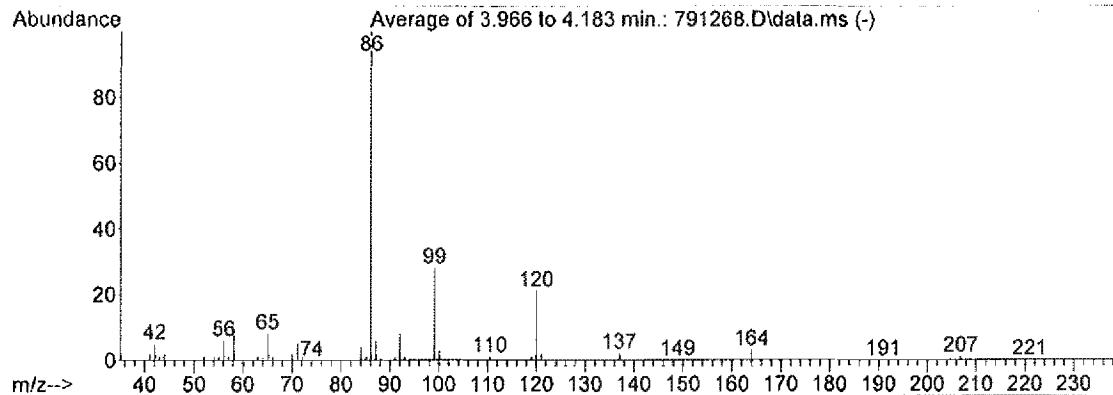
## Area Percent / Library Search Report

## Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791268.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:16  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 68  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                                    | CAS#        | Qual |
|-----|------|---|-------------|------|
| 3   | 4.00 | C:\Database\NIST05a.L                         |             |      |
|     |      | Benzamide, 4-amino-N-[2-(diethylamino)ethyl]- | 000051-06-9 | 83   |
|     |      | Benzoic acid, 4-amino-, 2-(diethylamino)-     | 000059-46-1 | 83   |
|     |      | Benzoic acid, 4-amino-, 2-(diethylamino)-     | 000059-46-1 | 80   |



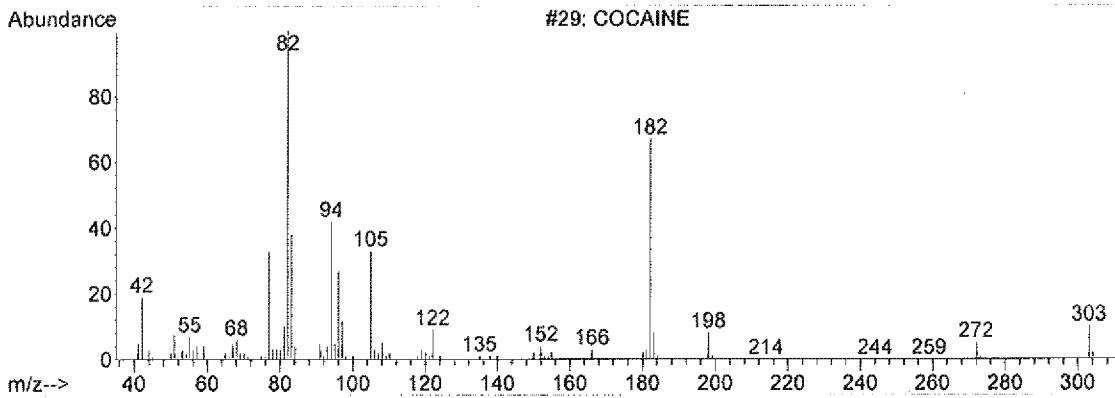
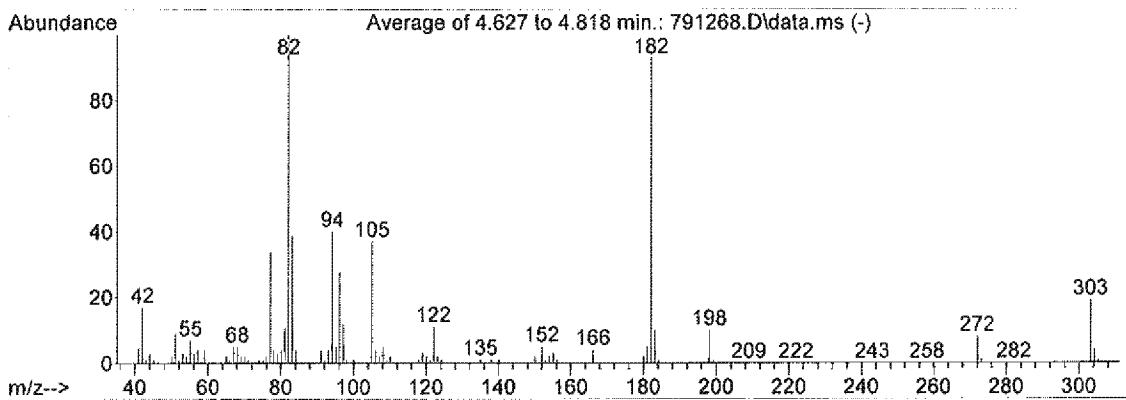
Area Percent / Library Search Report

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791268.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:16  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 68  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 4   | 4.67 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



| Information from Data File: |                                       |        |         |       |       |
|-----------------------------|---------------------------------------|--------|---------|-------|-------|
| File Name                   | F:\Q2-2011\SYSTEM 7\06_09_11\791269.D |        |         |       |       |
| Operator                    | ASD                                   |        |         |       |       |
| Date Acquired               | 9 Jun 2011 23:28                      |        |         |       |       |
| Sample Name                 | [REDACTED]                            |        |         |       |       |
| Submitted By                | ASD                                   |        |         |       |       |
| Final Number                | 69                                    |        |         |       |       |
| Acquisition Method          | DRUGS, M                              |        |         |       |       |
| Integrator                  | RTB                                   |        |         |       |       |
| Abundance                   | TIC: 791269.D\data.ms                 |        |         |       |       |
| Time-->                     | 2.00                                  | 2.50   | 3.00    | 3.50  | 4.00  |
|                             | 5.00                                  | 5.50   | 6.00    | 6.50  | 7.00  |
|                             | 7.50                                  | 8.00   | 8.50    | 9.00  | 9.50  |
| Time-->                     | 4.670                                 | 4.003  | 4.003   | 4.003 | 4.003 |
| Ret. Time                   | Area                                  | Area % | Ratio % |       |       |
| 2.102                       | 213920                                | 5.21   | 6.69    |       |       |
| 2.313                       | 195844                                | 4.77   | 6.12    |       |       |
| 4.003                       | 496120                                | 12.09  | 15.51   |       |       |
| 4.670                       | 3199138                               | 77.93  | 100.00  |       |       |

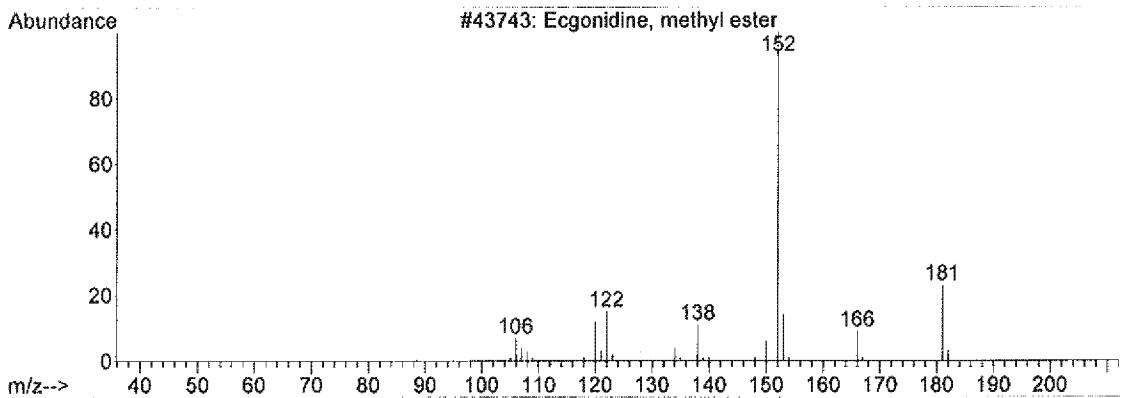
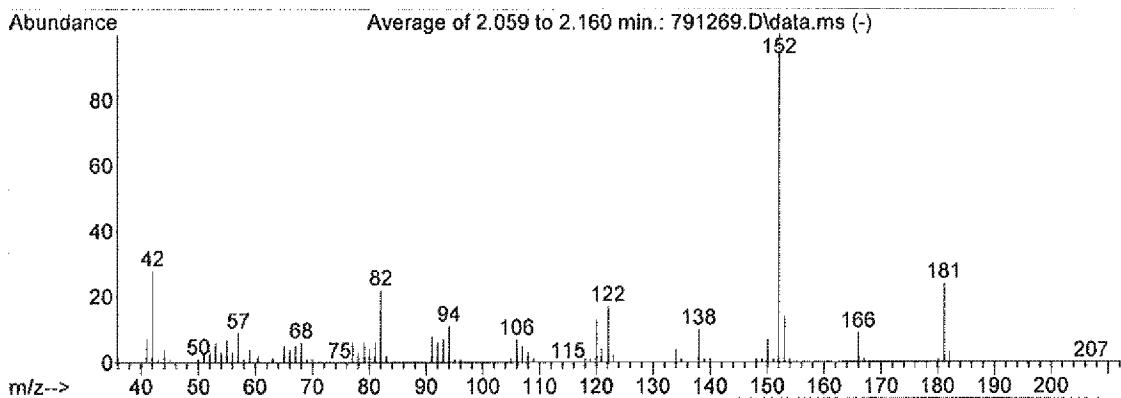
## Area Percent / Library Search Report

## Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791269.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:28  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 69  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                          | CAS#        | Qual |
|-----|------|-------------------------------------|-------------|------|
| 1   | 2.10 | C:\Database\NIST05a.L               |             |      |
|     |      | Egonidine, methyl ester             | 127379-24-2 | 98   |
|     |      | 2-Carbomethoxy-8-methyl-8-azabicycl | 043021-26-7 | 97   |
|     |      | Benzeneethanamine, 3,4-dimethoxy-   | 000120-20-7 | 43   |



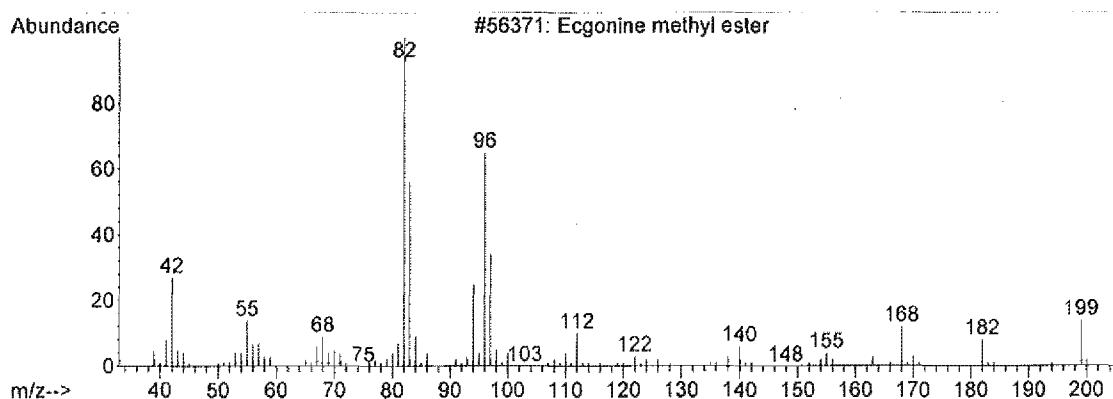
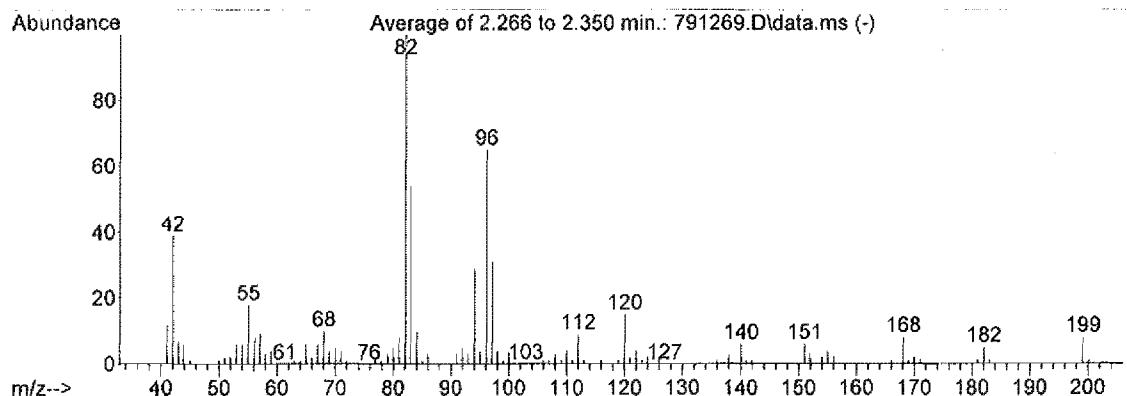
## Area Percent / Library Search Report

## Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791269.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:28  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 69  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                  | CAS#        | Qual |
|-----|------|-----------------------------|-------------|------|
| 2   | 2.31 | C:\Database\NIST05a.L       |             |      |
|     |      | Ecgonine methyl ester       | 106293-60-1 | 97   |
|     |      | Ecgonine methyl ester       | 106293-60-1 | 95   |
|     |      | Pseudoecgonine methyl ester | 099189-88-5 | 94   |

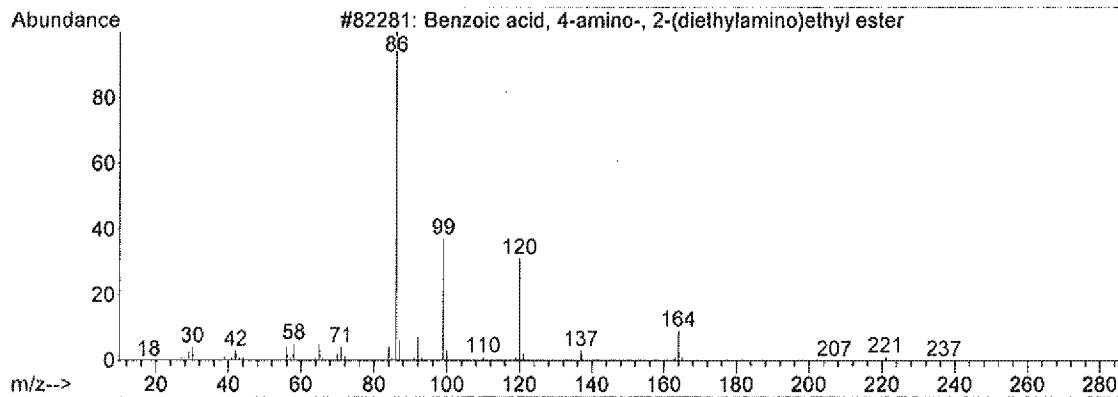
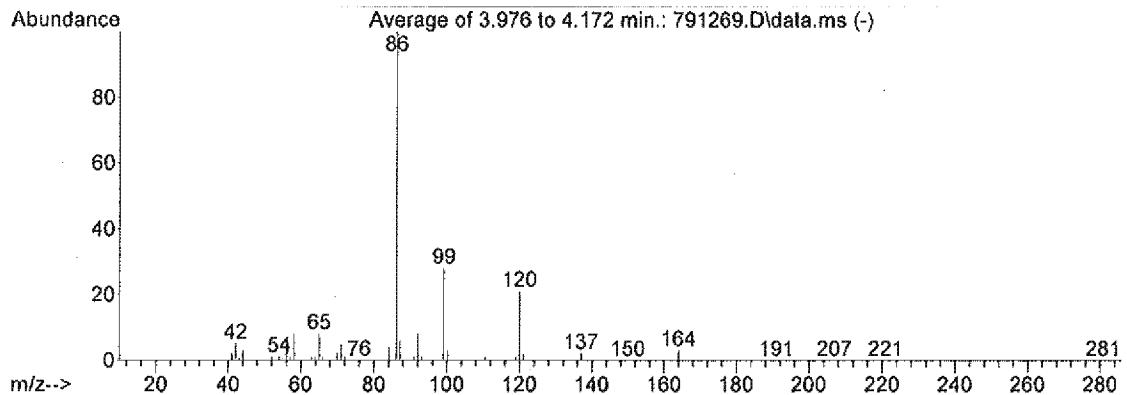


## Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791269.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:28  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 69  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID  | CAS#        | Qual |
|-----|------|---|-------------|------|
| 3   | 4.00 | C:\Database\NIST05a.L                               |             |      |
|     |      | Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester | 000059-46-1 | 83   |
|     |      | Benzamide, 4-amino-N-[2-(diethylamino)ethyl]-       | 000051-06-9 | 83   |
|     |      | Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester | 000059-46-1 | 80   |

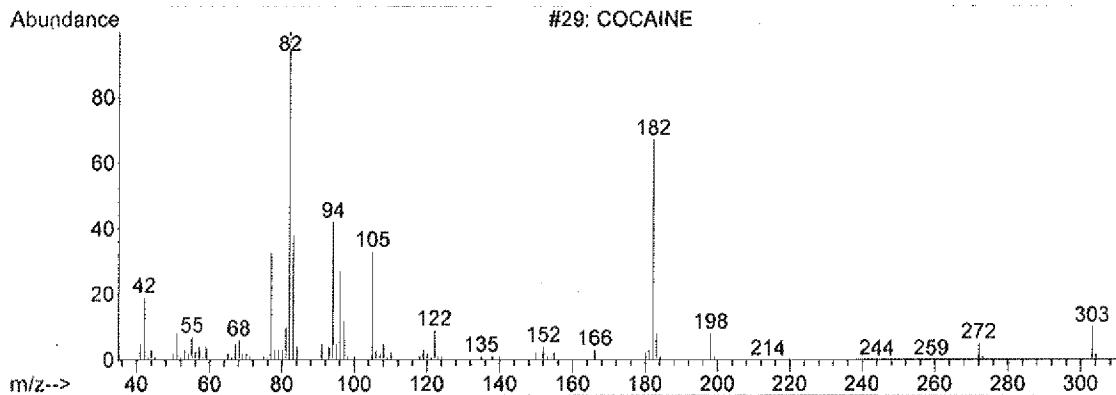
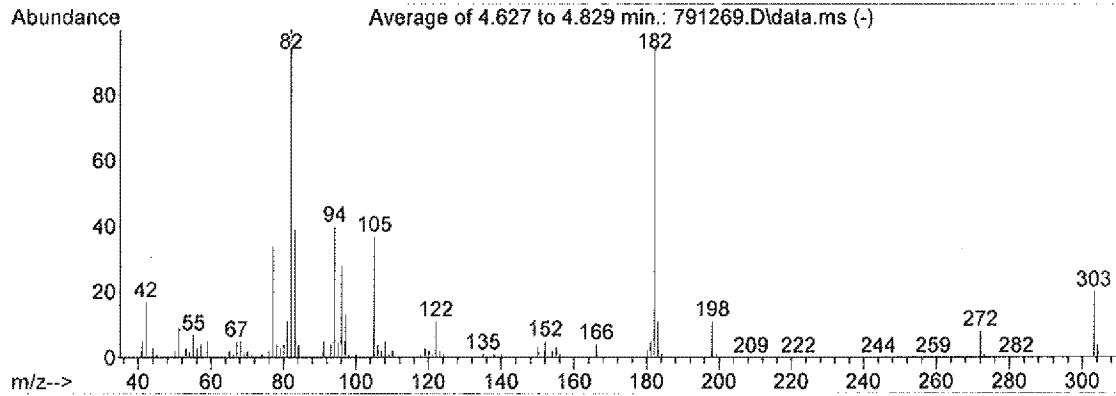


## Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791269.D  
Operator : ASD  
Date Acquired : 9 Jun 2011 23:28  
Sample Name : XXXXXXXXXX  
Submitted by : ASD  
Vial Number : 69  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 4   | 4.67 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |



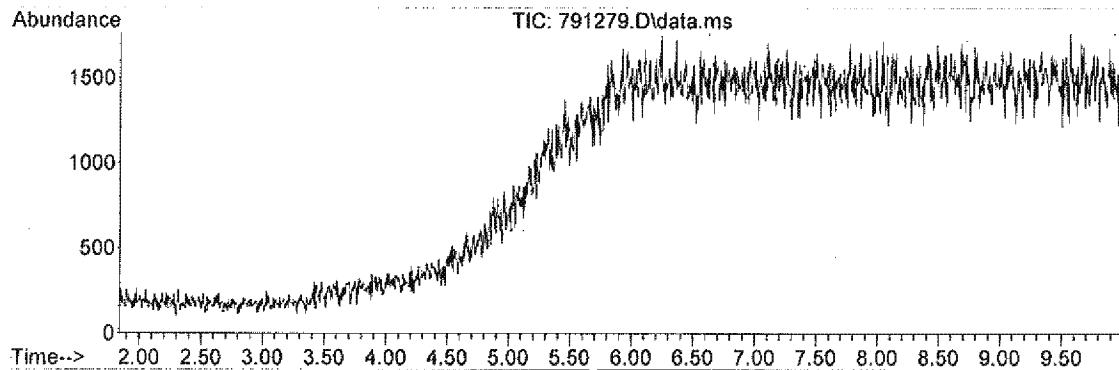
Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791279.D  
Operator : ASD  
Date Acquired : 10 Jun 2011 1:35  
Sample Name : BLANK  
Submitted by : ASD  
Vial Number : 2  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
|-----------|------|--------|---------|

---

\*\*\*NO INTEGRATED PEAKS\*\*\*

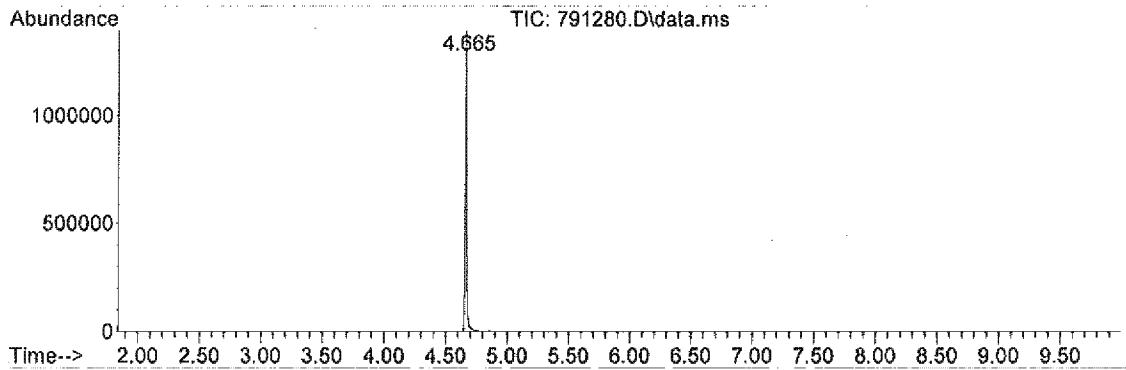
Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791280.D  
Operator : ASD  
Date Acquired : 10 Jun 2011 1:48  
Sample Name : COCAINE STD  
Submitted by : ASD  
Vial Number : 58  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---



---

| Ret. Time | Area    | Area % | Ratio % |
|-----------|---------|--------|---------|
| 4.665     | 1233319 | 100.00 | 100.00  |

---

Area Percent / Library Search Report

---

Information from Data File:

File Name : F:\Q2-2011\SYSTEM 7\06\_09\_11\791280.D  
Operator : ASD  
Date Acquired : 10 Jun 2011 1:48  
Sample Name : COCAINE STD  
Submitted by : ASD  
Vial Number : 58  
AcquisitionMeth: DRUGS.M  
Integrator : RTE

---

Search Libraries: C:\Database\SLI.L Minimum Quality: 80  
C:\Database\NIST05a.L Minimum Quality: 80  
C:\Database\PMW\_TOX2.L

| PK# | RT   | Library/ID                   | CAS#        | Qual |
|-----|------|------------------------------|-------------|------|
| 1   | 4.66 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99   |

